III. Gather Data

A. Current Speed and Direction vs. Depth

- Click on the "Brazil" site. (This is the area of the Atlantic Ocean on which you will be gathering data.)

- Click "Back" until you get back to the OAR "Ocean Currents" Gather Data site.

- Click on the "WOCE 1" site.

1. Fill in the missing information in Chart 1 below.

- Click "Back" until you get back to the OAR Ocean Currents Gather Data site.
- Click on the "WOCE 2" site.

2. Fill in the missing information in Chart 1 below.
- Click "Back" until you get back to the OAR Ocean Currents Gather Data site.
- Click on the "WOCE 3" site.

3. Fill in the missing information in Chart 1 below.
- Click "Back" until you get back to the OAR Ocean Currents Gather Data site.
- Click on the "WOCE 4" site.

4. Fill in the missing information in Chart 1 below.
- Click "Back" until you get back to the OAR Ocean Currents Gather Data site.
- Click on the "WOCE 5" site.

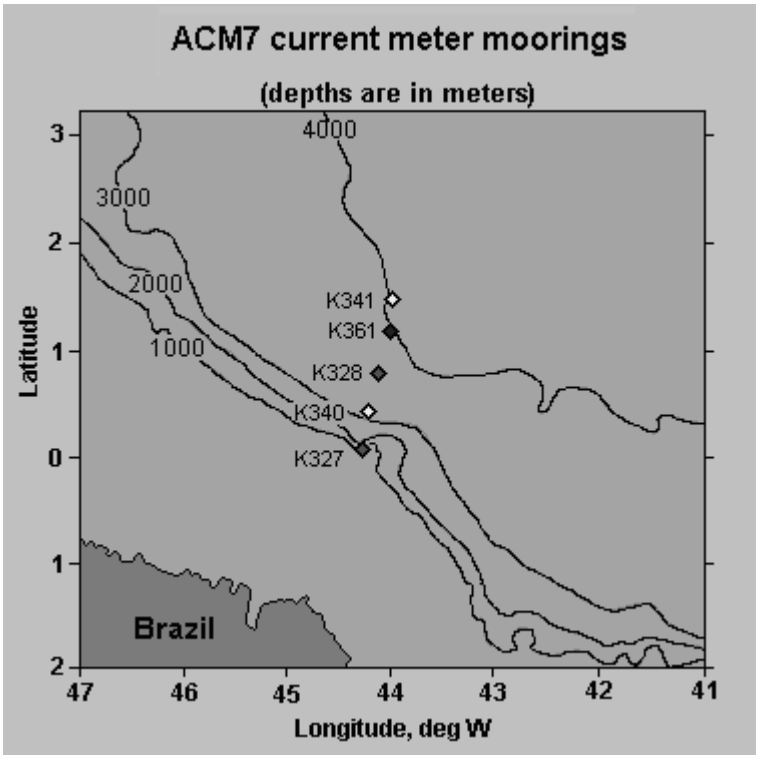
5. Fill in the missing information in Chart 1 below.

Chart 1

Mooring Name	K327	K340	K328	K361	K341
Depth of Current Meter					
Sea Floor Depth					
Mean (average) Current Speed					
Mean Degrees of Current Direction					
Mean Compass Current Direction of current N, S, E, W					
Latitude/Longitude					

- Use Chart 1 above and the map of the Brazilian coast below to help you do the following activities.

6. On the map below, draw arrows showing the direction of the current. The arrow heads should point in the direction the current flows <u>from</u> the station.



7. What is the relationship between seafloor depth and current speed?

_____

_____

8. Does the current seem to flow only along the shore, out to sea, or into the shore? _____

- Click "Back" until you get back to the OAR "Ocean Currents" Gather Data site.

B. Open Ocean Current Speed and Direction at 45 meters

- Click on the "Tropical Atmosphere Ocean Array 45 Meter" site.

- Look at the top graph.

1. What <u>month</u> has the greatest current speed? (Current speed is shown as centimeters per second on the vertical scale.) _____

2. What <u>season</u> shows the greatest current speed?_____

- Look at the bottom graph.

3. What <u>season</u> shows the least variation (change) in direction of current flow? _____

4. What is the <u>compass</u> <u>direction</u> of flow during this <u>season</u>? _____

5. Write the average current speed in June at 45 meters in Chart 2 below.

- Write the number that best fits the graph during June. The graph will not be a straight line, so use a best estimate of the average directions and speeds.

6. Write the average current direction in June at 45 meters in Chart 2 below.

- Click "Back" to get back to the OAR Ocean Currents site.

Chart 2

Depth	Average June Current Speed	Average June Current Direction	
		degrees	compass
45 m	cm/sec		
160 m	cm/sec		
250 m	cm/sec		

C. Open Ocean Current Speed and Direction at 160 meters

- Click on the "Tropical Atmosphere Ocean Array 160 Meter" site.

- Look at the top graph.

1. Write the average current speed in June at 160 meters in Chart 2 above.

- Look at the bottom graph.

2. Write the direction of current flow in June at 160 meters in Chart 2 above.

- Click "Back" to get back to the OAR Ocean Currents site.

D. Open Ocean Current Speed and Direction at 250 meters

- Click on the "Tropical Atmosphere Ocean Array 250 Meter" site.

- Look at the top graph.

1. Write the average current speed in June at 250 meters in Chart 2 above.

- Look at the top graph.

2. Write the direction of current flow in June at 250 meters in Chart 2 above.

E. Interpreting Data in Chart 2

1. Is there a relationship between depth and current speed? If so, what is it?

_____

_____

_____

2. Is there a relationship between depth and current direction? If so, what is it?

_____

_____

- Click "Back" until you get back to the OAR Ocean Currents Gather Data site.

F. GPS Upgraded Drifters

- Click on the "Global Positioning Satellite Tracking" site.

- Scroll down to the second picture.

- Read the paragraph between the second and third pictures.

1. What advantage is there to running the drifter's transmitter more often?

_____

_____

- Click "Back" until you get back to the OAR Ocean Currents main screen.
- Click "Application".